1) Existing National Environmental Regulations

a) Job Impacts from Existing National Environmental Regulations

CAA, in general:

- Environmental technology industries provides direct employment in manufacturing pollution control equipment and also creates indirect employment in supporting industries and the service sectors, such as wholesale and retail trades (*From JK-C Growth in GreenTechnologies.doc)*
  - *Total number of jobs*, including both direct and indirect employment grew from approx 1.3M in 1977 to 3.2M in 2002. *Saha Bansari, Barry Gale, Lou Browning, and Jim Staudt, "The Clean Air Act Amendments: Spurring Innovation and Growth While Cleaning the Air," Report Prepared for U.S. EPA by ICF Consulting, October 27, 2005.*

- Average employment impacts associated with the manufacture, installation and operation of a scrubber for a series of model scrubbers *(Jason Price, Nadav Tanners, Jim Neumann (IEc) and Roy Oomen (ERG), Employment Impacts Associated with the manufacture, Installation and Operation of Scrubbers, Memo to Ellen Kurlansky, January 15, 2010)*

EXHIBIT 1. SUMMARY OF EMPLOYMENT IMPACTS PER MODEL SCRUBBER

MODEL SCRUBBER	MODEL SCRUBBER DESCRIPTION	ONE-TIME EMPLOYMENT IMPACTS (ANNUAL EQUIVALENT FTEs)[2]	RECURRING ANNUAL EMPLOYMENT IMPACTS (FTEs PER YEAR)[3]
Model Scrubber 1	Medium/Large Utility Boilers	848 - 1,001	103
Model Scrubber 2	Small Utility Boilers	409 - 493	39
Model Scrubber 3A[1]	Large Industrial/ Institutional Boilers (method 1)	333 - 400	29
Model Scrubber 3B[1]	Large Industrial/ Institutional Boilers (method 2)	77 - 91	16
Model Scrubber 4	Small- and Medium-Sized Industrial/Institutional Boilers	40 - 48	6

Notes:

1. As described in later sections of this document, Model Scrubbers 3A and 3B are different analytic variants of the same model scrubber. Both represent scrubbers at large industrial boilers, but we estimate employment impacts for Model Scrubber 3A based on one methodology and Model Scrubber 3B based on another.
2. One-time employment impacts reflect the labor required for the manufacturing and installation of each model scrubber, including the labor required to produce scrubber components (e.g., the absorber vessel) that scrubber makers purchase from other firms.
3. Recurring employment impacts include labor required for the operation, maintenance, and administrative support for each scrubber over its full lifetime of operation.

NOx SIP Call, specifically:

- According to the Institute of Clean Air Companies, "the NOx SIP Call required 23 eastern states and the District of Columbia to participate in a regional cap-and-trade program in order to address regional transport of ozone across state boundaries. The NOx cap for the program was based upon an equivalent NOx emissions rate of 0.15 lb/MMBtu and was to be implemented during the summer ozone season from May 1st to September 30th of each year beginning in 2003-04. At the time, conventional technologies such as low NOx burners were unable to achieve this level of emissions reduction spurring the application of SCR technology to control NOx emissions from coal fired power plants in the United States."

- "More stringent regulations and successful operating experience have led to a sharp increase in the number of SCR systems installed in the U.S. We estimate **approximately 71 gigawatts (139 units) of SCR capacity was installed from 2000-04, in the NOx SIP Call region resulting in approximately 24,000 direct man-year jobs and 36,000 indirect jobs.**" *Memo from David C. Foerter, ICAC Executive Director, to Ellen Kurlansky, December 28, 2010.*

CAIR, specifically:

- The Institute of Clean Air Companies estimates "that **over the past seven years, the implementation of CAIR Phase I resulted in 200,000 jobs in the air pollution control (APC) industry...**
  - "Specifically, a **typical turnkey installation of a 500MW scrubber is estimated to employ approximately 200 people, with about 80% dedicated to construction and 20% for engineering and project management** *(Taken by ICAC from Engineering and Economic factors Affecting Installation of Control Technologies for Multipollutant Strategies; US EPA, 2002)*

- ...In these current market conditions the APC industry is in a period of underutilization as compared to the NOx SIP Call and CAIR Phase I years...
- ...Many of the technologies that will be needed to be be installed to comply with the proposed Interstate Transport Rule and the as yet-to-be-proposed utility MACT rule are likely to be the same technologies installed in recent years for other successful and more labor-intensive programs." *Letter from David C. Foerter, ICAC Executive Director, to Senator Tom Carper, Nov 3, 2010.*

2) Industry Investments in Clean Technology/Innovation: Job Impacts [1]

General Motors *From Automotive News, 11/30/2010*
http://www.autonews.com/apps/pbcs.dll/article?AID=/20101130/OEM01/101139991/1261

[1] Additional examples of industry-specific jobs created and/or expected within Ohio, Michigan, Minnesota, Indiana and Texas can be found in the companion working document, *Compilation of Press Releases on Clean Tech Jobs Created in A Sampling of State January 30 2011.*

- will hire 1,000 engineers over the next two years to improve technology related to electric vehicles. "Starting today and continuing from 2011 into 2012, GM will be hiring 1,000 new engineers and researchers from here in Michigan to help with such things as r&d, the development of motors and battery technology"
- The jobs are part of GM's strategy to "develop, validate and manufacture automotive battery, electric motor and power control technologies in-house as core competencies,"
- has invested more than $700M in eight Michigan facilities to support Volt production; ... the Volt now is ready to ship to dealers, after a more than four-year journey from concept to reality.
- *"It's a step into the future and a precursor to what will eventually happen -- the electrification of the car..."* GM CEO Dan Akerson.

3) Existing State or Regional Environmental or Energy Efforts: Job Impacts[2]

New York's Systems Benefits Charge (SBC) Programs including Energy $mart[SM] Public Benefits Program

- These programs are devoted to promoting energy efficiency and demand management, facilitating renewable energy development, providing energy services to low-income New Yorkers, and conducting research and development. The activities pursued by the Energy $mart[SM] Program include disseminating information to increase consumer energy awareness, marketing, providing financial incentives, developing and testing new products, commercializing new technologies, and gathering data and information. According to the New York State Energy and Research Development Authority, between 1998 – 2009, these SBC-supported programs:
  - Projecting to 2020, E$P is expected to create 86,400 net job years
  - Saved 3,820 GWh of Electricity
  - Reduced 3,030 and 5,710 tons of NOx and SOx respectively
  - Decreased annual CO2 emissions by 2.3 million tons
  - Reduced annual energy bills by $680 million for participating customers
  - Created and retained 5,300 jobs

New York's System Benefits Charge Programs: Evaluation and Status Report Quarterly Report to the Public Service Commission, Quarter ending September 30, 2010 Final Report, November 2010. http://www.nyserda.org/3rd-quarter-2010-report.pdf

4) Future Environmental (& Energy) Regulations: *Prospective* (projected) Job Estimates

a) National Climate &/or Energy Policy:

[2] Additional examples of clean/efficient technology-related jobs created within Ohio, Michigan, Minnesota, Indiana and Texas can be found in the companion working document, *Compilation of Press Releases on Clean Tech Jobs Created in A Sampling of State January 30 2011.*

- The country as a whole can gain 918,000 to 1.9 million jobs under comprehensive federal energy and climate policy. All 50 states would benefit. David Roland-Holst and Fredrich Kahrl, UC Berkeley, Madhu Khanna, Univ of Illinois, and Jennifer Baka, Yale Univ., *Clean Energy and climate Policy for US Growth and Job Creation*, October, 2009.

b) National Energy Policy:

Employment Potential – Renewable Energy vs. Coal: Quick stats

- *Over the course of a 10-year period the solar industry creates 5.65 jobs per million dollars in investment, the wind energy industry 5.7 jobs, and the coal industry only 3.96.*
  Daniel Kammen, Kamal Kapadia, and Matthias Fripp, "Putting Renewables to Work: How Many Jobs Can the Clean Energy Industry Create?" UC Berkeley: Renewable and Appropriate Energy Laboratory (RAEL), April 2004 (updated January 2006), 12, http://rael.berkeley.edu/files/2004/Kammen-Renewable-Jobs-2004.pdf

- *Wind and solar energy generate 40 percent more jobs per dollar invested than does coal mining.*
  Virinder Singh, BBC Research and Consulting, and Jeffrey Fehrs, "The Work That Goes into Renewable Energy," Renewable Energy Policy Project, November 2001, 8.

National Renewable Electricity Standard – 25% by 2025

- ... will create 297,000 new jobs nationally and bring $13.5 billion in economic development to farmers, ranchers, and rural landowners, and lower electricity and natural gas bills by $64.3 billion. *Clean Energy, Green Jobs*, Union of Concerned Scientists, 2009.

- ... will create 274,000 new jobs nationally. All 50 states would see job growth: biomass, hydropower, and waste-to-energy in the Southeast, wind energy in the Great Plains and Midwest, and hydropower and solar power in the West. Navigant Consulting, *Job Impact of a National Renewable Electricity Standard*, February, 2010.

- "Including multiplier effect through the economy, the projected annual impact on the nation from producing and converting feedstocks into energy would be in excess of $700 billion in economic activity and 5.1 million jobs in 2025, most of that in rural areas." Burton C. English, Daniel G. De La Torre Ugarte, Kim Jensen, et. al., Univ. of Tennessee, *25% Renewable Energy for the United States by 2025: Agricultural and Economic Impacts*, November, 2006.

National Renewable Electricity Standard – 20% by 2020

- Two separate recent studies have concluded that if the United States adopted a 20% Renewable Portfolio Standard for its electrical utilities, over 185,000 jobs could be created by the year 2020.
  Daniel Kammen, Kamal Kapadia, and Matthias Fripp, "Putting Renewables to Work: How Many Jobs Can the Clean Energy Industry Create?" UC Berkeley: Renewable and Appropriate Energy Laboratory (RAEL), April 2004 (updated January 2006), 12,

http://rael.berkeley.edu/files/2004/Kammen-Renewable-Jobs-2004.pdf;
Union of Concerned Scientists, *Cashing In on Clean Energy*, 2007,
http://www.ucsusa.org/clean_energy/clean_energy_policies/cashing-in.html

c) State or Regional Climate & Energy Efforts: Prospective (Future Potential) Job Analyses[3]

Scenario: Full funding of Connecticut oil and natural gas conservation programs

- Encourages installation of EE equipment beginning in 2005; Oil and gas programs expected to avoid 1.89 and 2.07 MMTCO2e by 2020, respectively. Program funded by a 3% natural gas and oil-use surcharge. According to REMI in a study funded by USEPA, net benefits from 2005-2020 include ($1996):
  - 2,092 average annual jobs
  - $3.1M output
  - $2.03M GSP
  - $1.8M real disposable income

  Economic Impact of Oil and Natural Gas Conservation Policies, REMI, 2004.

Scenario: Increased investment in Clean Energy in Illinois:

- RE to supply 8% of generation by 2012, 16% by 2020; EE to reduce load 16% by 2020; CHP to supply 1570 MW by 2020; with 2000 MW of IGCC by 2020. According to the Energy Resources Center at the University of Illinois, Chicago, by 2020, this would result in
  - the avoidance of:
    - 0.4 million tons per year (mtpy) of SOx
    - 0.2 mtpy of NOX
    - 90.1 mtpy of CO2
  - And an increase in:
    - output of 2.12%,
    - income of 1.83%; and
    - employment of 1.85% (191,000 net new jobs).

  The Economic And Environmental Impacts Of Clean Energy Development In Illinois, Prepared by Energy Resources Center, The University of Illinois at Chicago, for The Illinois Department of Commerce and Economic Opportunity, June 2005.
  http://www.erc.uic.edu/PDF/Clean_Energy_Development.pdf

Scenario: Increased EE in Southwest Homes and Businesses

- According to SWEEP, $9B invested in EE in homes and businesses in the Southwest from 2003-2020 to achieve widespread adoption of cost-effective, commercially available EE measures would reduce electricity consumption by 18% by 2010 and 33% by 2020. SWEEP's analysis finds that this would also:

[3] Additional examples of clean/efficient technology-related jobs expected within Ohio, Michigan, Minnesota, Indiana and Texas can be found in the companion working document, *Compilation of Press Releases on Clean Tech Jobs Created in A Sampling of State January 30 2011.*

- Avoid $10.6B capacity investment (thirty-five 500 MW plants)
- Avoid $25B electricity supply costs per year by 2020
- Avoid $2.4B end-use natural gas cost per year by 2020
- Reduce CO2 emissions by 26% from the 2020 baseline
- Reduce SO2 emissions by 4% from the 2020 baseline
- Reduce NOX emissions by 5% per year from the 2020 baseline
- Increase regional employment by 0.45% (58,400) FTE jobs per year versus 2020 baseline
- Increase salary income by $1.34B per year versus 2020 baseline

The New Mother Lode: The Potential for More Efficient Electricity Use in the Southwest, SWEEP (2002)

Scenario: Nevada RPS

- Nevada legislature established an RPS that included a 5% renewable energy requirement in 2003 and a 15% requirement by 2013. The Nevada American Federation of Labor-Congress of Industrial Organizations (AFL-CIO) estimated the job diversification effects of the RPS and found:
  - From 2003-2013, the RPS would create 27,229 total, direct FTE jobs.
  - 19,138 are estimated to be manufacturing jobs
  - 8,092 are installation and O&M jobs

  (Above numbers taken from draft report; updated & final report *JOBS AND RENEWABLE ENERGY PROJECT Final Technical Report, Submitted by George Sterzinger, December 2006, DOE Award Number DE-FC36-04GO14213, Renewable Energy Policy Project available at:* http://www.osti.gov/bridge/purl.cover.jsp;jsessionid=1D18EE1D40A99597D16F48DD15785329?purl=/899887-T9Q65H/)

Development of Large Scale Electric Drive Industries in Cleveland, OH:

- According to a study by EPRI, "the potential impacts of EDV-related industry development in Greater Cleveland region are considerable.
  - Economic impacts of new vehicle plant construction— specifically the direct addition of 2,850 construction jobs—would amount to an increased economic output of over $490 million, total employment increasing by 5,130 jobs/yr, and increased labor income of nearly $220 million.
  - The addition of four new vehicle production plants and 12,100 production jobs would equate to over *$21 billion* in increased output, nearly 70,000 jobs/yr created and an increase in labor income of nearly *$3.9 billion.*
  - Construction and production in battery manufacturing and recycling could increase output by over $910 million per year, increase regional employment by nearly 7,250 jobs per year, and increase labor income by $334 million per year.
  - Research and development activities could increase output by $21.5 million per year, increase employment by nearly 230 jobs per year, and increase labor income by nearly $9 million per year.

- Regional economic impacts of infrastructure system supplier industries range from $190-$539 million per year increased economic output, 1,177-2,996 jobs per year increase in employment, and $51-$152 million per year increased labor income.

- (Note that these results do not assess potential negative economic impacts in the region associated with a decline in the domestic auto industry corresponding to reduced production of conventional vehicles as the shift to EDVs occurs). *EPRI, Regional Economic Impacts of Electric Drive Vehicles and Technologies: Case Study of the Greater Cleveland Area, 7/31/2009.* http://my.epri.com/portal/server.pt?Abstract_id=000000000001018578

New York State

- A New York State Energy Office study concluded that **wind energy would create 27% more jobs than coal and 66% more than a natural gas plant** per kilowatt hour generated.
  A.K. Sanghi, *Economic Impacts of Electricity Supply Options*, New York State Energy Office, July 1992.

Wisconsin

- A Union of Concerned Scientists analysis conducted for the state of Wisconsin found that an 800 MW mix of **new renewables would create about 22,000 more job-years than would new natural gas and coal plants** over a 30-year period.
  Michael Brower, Michael Tennis, and Eric Denzler, *Powering the Midwest*, Union of Concerned Scientists, 1993, 107-108.

Colorado

- A study by Economic Research Associates of energy efficiency and renewable energy as an economic development strategy in Colorado found an energy bill savings of $1.2 billion for Colorado ratepayers by 2010 with a net gain of 8,400 jobs. The study also assessed nine other states and reached similar conclusions.
  Skip Laitner and Marshall Goldberg, *Energy Efficiency and Renewable Energy Technologies as an Economic Development Strategy*, April 1996, http://solstice.crest.org/renewables/era/index.html

California

- In 2001, the California Energy Commission's Public Interest Energy Research program sponsored a study from the Electric Power Research Institute (EPRI) that included job creation estimates from renewable energy development based on existing and planned projects in California. These include a construction employment rate ranging from 2.57 jobs/MW for wind to 7.14 jobs/MW for solar photovoltaic (PV) systems, and an operating employment rate ranging from 0.12 jobs/MW for PV to 2.28 jobs/MW for landfill digester gas.
  Brad Heavner and Bernadette Del Chiaro, Renewable Energy and Jobs, Environment California Research and Policy Center, 2003, http://www.environmentcalifornia.org/uploads/OW/aa/OWaa2RaedIfHwQOWbxKd5w/Renewable_Energy_and_Jobs.pdf

Electric Energy Efficiency and Renewable Energy in New England

- RAP conducted an assessment of EE/RE policies on the books in New England in 2005 and projected their expected benefits by 2010. They found that in 2004, EE reduced peak demand by 1,421 MW.
- From 2000 – 2010, they estimated that existing EE policies in New England would:
  - Avoid:
    - 31.7M tons (6%) of CO2,
    - 34,200 tons of SO2,
    - 22,039 tons of NOX,
  - Yield a net increase of:
    - $6.1B in economic output,
    - $1.04M in wage income,
    - 28,190 in job years

Electric Energy Efficiency And Renewable Energy In New England: An Assessment of Existing Policies and Prospects for the Future, The Regulatory Assistance Project, Montpelier, Vermont, Sedano et al. (2005). http://www.raponline.org/Pubs/RSWS-EEandREinNE.pdf

5) Non-Jobs Related Information Related to Existing Environmental Regulations (For Reference)

a) Industry Costs & Existing Environmental Regulations: General

NATIONALLY

- "The possibility that workers could be adversely affected by increasingly stringent environmental policies has led to claims of a "jobs versus the environment" trade-off by both business and labor leaders. The present research examines this claim at the industry level for four heavily polluting industries: pulp and paper mills, plastic manufacturers, petroleum refiners, and iron and steel mills. Combining a unique plant-level data set with industry-level demand information, we find that increased environmental spending generally does **not** cause a significant change in employment. *Richard Morgenstern, Willam A. Pizer, and Jhih-Shyang Shih, Jobs Versus the Environment: An Industry-Level Perspective, Journal of Environmental Economics and Management, Volume 43, Issue 3, May 2002, Pages 412-436.*

- "Environmental costs are generally below 2 percent of total business costs. Firms that do leave the U.S. generally do so in pursuit of lower labor and health-coverage costs, expenditures that form a much higher percentage of their total costs. Economists searching for evidence supporting widespread flight of polluting industries have not found significant effects." *Environmental Regulation and the Competitiveness of US Manufacturing: What does the evidence tell us? Journal of Economic Literature, Vol. 33, No. 1, (Mar 1995), p. 132-163,* http://www.ucl.ac.uk/cserge/Jeffe%20et%20al%201995.pdf.

- Technological improvements and learning by doing tend to lower actual control costs over time *(From Jim K-C File on Tech Innovation & Pollution Control Costs)*

  - **Acid Rain SO2 Trading Program:** Cost estimates of the Acid Rain SO2 trading program by Resources for the Future (RFF) and MIT have been as much as 83 percent lower than originally projected by EPA. Part of the reason, according to the Harrington study, was that sulfur dioxide scrubbers turned out to be more efficient (95% removal vs. 80-85% removal) and more reliable (95% vs. 85% reliability) than expected, and that unanticipated opportunities arose to blend low and high sulfur coal in older boilers to a greater extent to originally estimated. *Carlson, Curtis, Dallas R. Burtraw, Maureen, Cropper, and Karen L. Palmer. 2000. "Sulfur Dioxide Control by Electric Utilities: What Are the Gains from Trade?" Journal of Political Economy 108(#6):1292-1326. Ellerman, Denny. January 2003. Ex Post Evaluation of Tradable Permits: The U.S. SO2 Cap-and-Trade Program. Massachusetts Institute of Technology Center for Energy and Environmental Policy Research.*

  - **NOx Emissions Reduction Technologies:** SCR catalyst costs decreasing from \$11k-\$14k/m^3 in 1998 to \$3.5k-\$5k/m^3 in 2004, and improved low NOx burners reduced emissions by 50% from 1993-2003 while the associated capital cost dropped from \$25-\$38/kW to \$15/kW.*Carlson, Curtis, Dallas R. Burtraw, Maureen, Cropper, and Karen L. Palmer. 2000. "Sulfur Dioxide Control by Electric Utilities: What Are the Gains from Trade?" Journal of Political Economy 108(#6):1292-1326. Ellerman, Denny. January 2003. Ex Post Evaluation of Tradable Permits: The U.S. SO2 Cap-and-Trade Program. Massachusetts Institute of Technology Center for Energy and Environmental Policy Research.* ICF Consulting. October 2005. The Clean Air Act Amendments: Spurring Innovation and Growth While Cleaning the Air. Washington, DC. Available at http://www.icfi.com/Markets/Environment/doc_files/caaa-success.pdf

  - **Chlorofluorocarbon (CFC) Phase-Out**: EPA used a combination of regulatory, market based (i.e., a cap-and-trade system among manufacturers), and voluntary approaches to phase out the most harmful ozone depleting substances. This was done more efficiently than either EPA or industry originally anticipated. The phaseout for Class I substances was implemented 4-6 years faster, included 13 more chemicals, and cost 30 percent less than was predicted at the time the 1990 Clean Air Act Amendments were enacted. *Holmstead, Jeffrey, 2002. "Testimony of Jeffrey Holmstead, Assistant Administrator, Office of Air and Radiation, U.S. Environmental Protection Agency, Before the Subcommittee on Energy and Air Quality of the committee on Energy and Commerce, U.S. House of Representatives, May 1, 2002, p. 10.*

  - **Multi-rule study:** Harrington et al. of Resources for the Future conducted an analysis of the predicted and actual costs of 28 federal and state rules, including 21 issued by EPA and the Occupational Safety and Health Administration (OSHA), and found a tendency for predicted costs to overstate actual implementation costs. *Harrington, W., R.D. Morgenstern, and P. Nelson. 2000. "On the Accuracy of Regulatory Cost Estimates." Journal of Policy Analysis and Management 19(2):297-322.*

- **EPA Fuel Control Rules**: A 2002 study by two economists with EPA's Office of Transportation and Air Quality examined EPA vehicle and fuels rules and found a general pattern that "all ex ante estimates tended to exceed actual price impacts." *Anderson, J.F., and Sherwood, T., 2002. "Comparison of EPA and Other Estimates of Mobile Source Rule Costs to Actual Price Changes," Office of Transportation and Air Quality, U.S. Environmental Protection Agency. Technical Paper published by the Society of Automotive Engineers. SAE 2002-01-1980.*

REGION-SPECIFIC ESTIMATES RELATED TO COSTS/PRODUCTIVITY

- "We find strong econometric evidence that South Coast regulations have induced very large investment in air pollution abatement capital and visual evidence that it has induced increases in abatement operating costs. Surprisingly, **we find no evidence that these large costs incurred to abate emissions had more than a negative, transitory effect on the productivity of South Coast refineries.** These refineries suffered a productivity decline in the 1980s but recovered to the national average by 1992, despite their heavy regulatory burden. In fact, **petroleum refining productivity in the South Coast Air Basin between 1987-1992 rose sharply during this period -- when several environmental regulations came into compliance *and* when productivity was *falling* in this sector elsewhere in the country.** What this suggests is that pollution abatement control expenditures associated with the SCAQMD regulations may, in fact, have been productivity enhancing so that the gross cost of pollution abatement may be an over-estimate of the net cost of regulation." *Environmental Regulation and Productivity: Evidence from Oil Refineries Eli Berman and Linda T.M. Bui, September 1998, revised May 1999.*

- The same study compared productivity in California refineries compared to Texas and Louisiana refineries that were not nearly as heavily regulated, and found better productivity in California, and no evidence of job losses related to environmental regulation. *Environmental Regulation and Productivity: Evidence from Oil Refineries Eli Berman and Linda T.M. Bui, September 1998, revised May 1999.*

b) Revenue/Export Benefits of Existing Environmental Regulations to U.S. Industry

CAA-induced technology innovations have helped promote the growth of the U.S. environmental technology industries

- *Total Revenue grew* from approximately **$30B in 1972 to $115B in 1990 and $215B in 2002.**
- *U.S. exports of environmental technologies* totaled about $30 billion in 2004, having **grown 130 percent between 1993 and 2003**. This growth was fueled by demand for pollution control equipment from the emerging Asian markets. *Saha Bansari, Barry Gale, Lou Browning, and Jim Staudt, "The Clean Air Act Amendments: Spurring Innovation and Growth While Cleaning the Air," Report Prepared for U.S. EPA by ICF Consulting, October 27, 2005.*